INSTRUCTIONS FOR

PHILCO 38-690

☆

SUPER HIGH-FIDELITY

AMERICAN AND FOREIGN RECEIVER

AUTOMATIC TUNING

WITH MAGNETIC TUNING

★

A MUSICAL INSTRUMENT OF QUALITY

INSTRUCTIONS
FOR INSTALLING AND OPERATING

PHILCO 38-690

DESCRIPTION

Philco Model 38-690 is a Super High-Fidelity superheterodyne receiver for use on alternating current (A.C.). It employs 20 Philco High-Efficiency self-centering glass tubes, and is designed to receive standard American broadcasts, and American and Foreign short-wave broadcasts up to 18.2 megacycles (18,200 kilocycles). Amateur, Ship and Aircraft Stations, and U. S. Police Calls, are all included in the tuning range of this model.

This model incorporates the proven Philco development, "Automatic Tuning," which enables you to select your favorite station in an instant. "Magnetic Tuning" is another valuable feature of this model. Its use assures correct tone of reception on ALL stations because it automatically overcomes incorrect tuning.

Other features of Model 38-690 are: the "spread-band" dial, which makes tuning easier because the stations are spaced farther apart on the dial; three speakers, providing full musical range coverage; acoustic clarifiers to eliminate "boominess"; and an undistorted output of 15 watts from the super high-fidelity audio system.

To get the full performance that is built into this receiver, please read and follow these instructions as carefully as possible.

INSTALLATION

Aerial and Ground

To enable you to get the full performance your set was designed to give, Philco engineers have perfected a scientifically designed aerial known as the Philco High-Efficiency Aerial. This aerial gives high-efficiency response on all tuning ranges of the receiver.

It is important to use the Philco High-Efficiency Aerial since this aerial was designed for use with the "Philco Foreign Tuning System," the newly perfected development of design and construction used in all Philco "American and Foreign" receivers.

Another feature of the Philco High-Efficiency Aerial is that it greatly reduces any noise that might be caused by electrical appliances or equipment in the vicinity. This noise-reduction feature is also effective on all tuning ranges.

A terminal panel is provided at the rear of the chassis for connecting the aerial. This panel contains three screw terminals, marked "RED," "BLK." and "GND." When attaching the Philco High-Efficiency Aerial, connect the red and black terminals of the aerial "transmission line" (lead-in) to terminals "RED" and "BLK" respectively.

If you use a temporary aerial connect it to the "RED" terminal.

A good ground connection is necessary for best foreign reception. With the Philco High-Efficiency Aerial, a ground lead and ground clamp are provided. Make the ground connection from the nearest water or radiator pipe to the terminal marked "GND" on the terminal panel.

Other Preliminaries

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Other Preliminaries

Locate the radio at a suitable place in the room, with due consideration to convenience of operation, appearance, tone, and handy connection to the aerial and an electric supply outlet. For best tone, the back of the set should be close up against the wall.

Remove all cardboard packing material, packing tags, etc., *from the chassis. Place the* knobs (furnished in the envelope with these instructions) on the control shafts. The illustration, Fig. 1, will show you which knob goes on which shaft. The flat portion of the knob-hole must be next to the flat portion of the shaft. Push the knobs (except the small "slow-speed" knob) on to within about $\frac{1}{16}$ inch of the face of the panel. The small (slow-speed) knob goes on the outer end of the Station Selector Shaft.

Insert the electric plug into the nearest electric supply outlet. Be sure your power supply is of the correct voltage and frequency (cycles), as specified on the receiver name label inside the cabinet.

OPERATING

It is suggested that before preparing to use "Automatic Tuning" you become familiar with the ordinary method of operating the set. Observe the illustration (Fig. 1) carefully before operating. Turn the "On-Off Switch and Bass Control" one step or notch to the right (clockwise). This supplies the power to the receiver and illuminates the dial. In a few moments the tubes will be sufficiently heated and the set ready to operate. Turn the Volume Control knob clockwise about half its range and the "Treble-Selectivity Control" to the extreme right (clockwise) position.

It is recommended that the control marked "Magnetic Tuning," be left in the "Out" position until you become thoroughly acquainted with the standard method of operating the receiver on the various tuning ranges. You will then be sufficiently familiar with the set to enjoy the convenience of "Automatic Tuning" and the improved performance obtainable through the use of Magnetic Tuning. The instructions given later under the headings "MAGNETIC TUNING" and "AUTOMATIC TUNING" explain their operation in detail.

Standard (American) Broadcasts

Turn the Tuning Range Selector to position 1, and tune in a suitable station or desired program by turning the Station Selector. The figures on the standard broadcast (lowest) scale are "kilocycles" (KC), as given in most station lists. For example: WJZ is tuned in at 760; WABC at 860. After selecting the station, adjust the volume control to suit your taste. Do NOT reduce volume by turning the "Station Selector" away from the station, as this will impair the tone. Always use the Volume Control knob to reduce or increase volume.

Bass Control

The same knob which turns the set on or off, regulates the amount of bass emphasis in any program. Turning this knob to the right (clockwise) increases bass emphasis. At low volume it is usually desirable to turn the knob well to the right.

Treble-Selectivity Control

The extreme right-hand knob is the "Treble-Selectivity Control," which determines the proportion of the higher range of the musical scale you will hear. The best position for this Control will depend on the type of program, musical range of the broadcast transmitter, and the presence or absence of strong stations operating on frequencies adjacent to the one desired.

On better type programs, such as operatic and orchestral broadcasts originating from "cleared channel" stations, turning this knob to the left will increase the treble response of the receiver and thus enable full enjoyment of these fine programs.

A general rule for adjusting this control is to turn it as far to the left as possible without bringing in interference. For low-powered or distant stations it should always be turned *to the extreme right.*

Short-Wave Reception

There are four tuning ranges on this model to cover short-wave reception. Select the desired range by turning the Tuning Range Selector to the proper position (see Fig. 1).

When tuning for short-wave stations, always use the Station Selector to obtain the desired "band" or station group; then, with the slow-speed knob, tune slowly across the desired band or the position marked for the desired station.

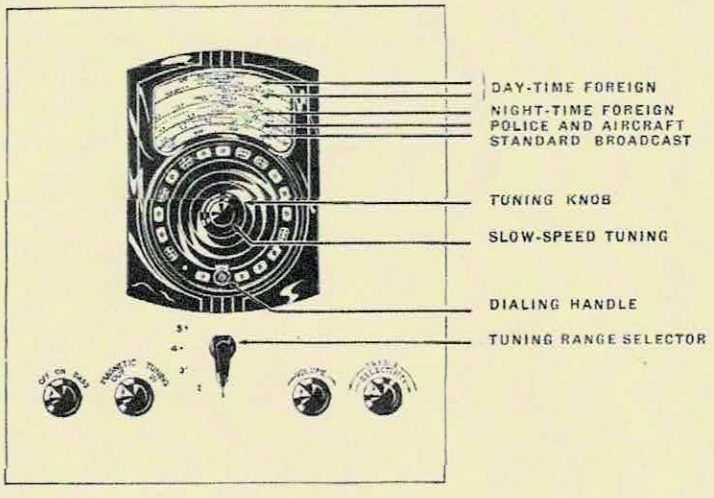

Fig. 1

Range 2 covers from 1.58 to 4.75 megacycles (1,580 to 4,750 kilocycles) and includes Police Calls, Amateur Stations, Aircraft Stations, and a few short-wave stations. The locations of these groups are plainly indicated on the dial.

Range 3, 4.7 to 7.4 megacycles, wave stations receivable in the late a between 5.7 and 6.8, this section bei calibration markings (dots). A num and their correct tuning positions in color. Names appearing close togeth quick selection.

Range 4 covers from 7.35 to 11.

Short-wave stations in these tw which are plainly marked by colored also, in color, and their tuning posit and 18 megacycles (Range 5); duri *or 15 (Range 5).*

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Range 3, 4.7 to 7.4 megacycles, includes American short-wave stations and foreign short-wave stations receivable in the late afternoon and after dark. These stations are tuned in mostly between 5.7 and 6.8, this section being indicated on the dial by the heavy red line below the calibration markings (dots). A number of powerful foreign stations are named on this range and their correct tuning positions indicated by a short line below the name and in the same color. Names appearing close together on the dial are printed in different colors to facilitate quick selection.

Range 4 covers from 7.35 to 11.6 and range 5 from 11.5 to 18.2 megacycles.

Short-wave stations in these two ranges are also grouped at certain sections of the dial, which are plainly marked by colored lines; many individual stations are named on these ranges also, in color, and their tuning positions indicated. During the forenoon, tune around 12, 15 and 18 megacycles (Range 5); during the afternoon and evening, around 9.5 (Range 4), 12, or 15 (Range 5).

The "Station List" included with these instructions will help you identify the various short-wave stations by the dial number on which they are received. Many foreign stations announce in English at intervals, giving their call letters and location. Further information on Short-Wave Stations is available in various radio magazines, periodicals and most daily newspapers.

Magnetic Tuning

Up till now it is assumed that the user has operated the set with the "Magnetic Tuning" switch in the "Out" position.

Before attempting to set up the receiver for Automatic Tuning, it is advisable that the owner learn something about "Magnetic Tuning" and how it works.

Briefly explained, "Magnetic Tuning," as the words imply, helps tune in the desired station by an effect similar to that of a magnet—pulling the station to the *exactly correct* tuning position, after the operator has turned the dial to *approximately* the correct position.

The simplest and most effective way to use this is:

1. With the Magnetic Tuning Switch "Out," tune in the desired station as correctly as possible in the ordinary way.
2. Turn the Magnetic Switch to "In." Your station is then tuned in perfectly—and will stay tuned in until you wish to change to another station.

We do not advise tuning from one station to another with the Magnetic Tuning Switch at the "In" position, as the effect of Magnetic Tuning in "holding" a powerful station might be confusing. For tuning in distant stations on frequencies close to powerful locals, always leave the Magnetic Tuning Switch turned to "Out."

Automatic Tuning

This system enables you to select your favorite station in an instant and to be sure it is automatically tuned in perfectly. The "Automatic Tuning" brings you to the *correct position* for the station desired and the "Magnetic Tuning" automatically completes the *exact* tuning-in of the station for perfect tone. **(The Magnetic Tuning Switch must always be turned to "In" when using Automatic Tuning.)**

SELECTING AND PLACING FAVORITE STATIONS ON THE DIAL

Your dealer will furnish you with station call-letter labels (covering your favorite stations) to insert in the proper places on the dialing circle.

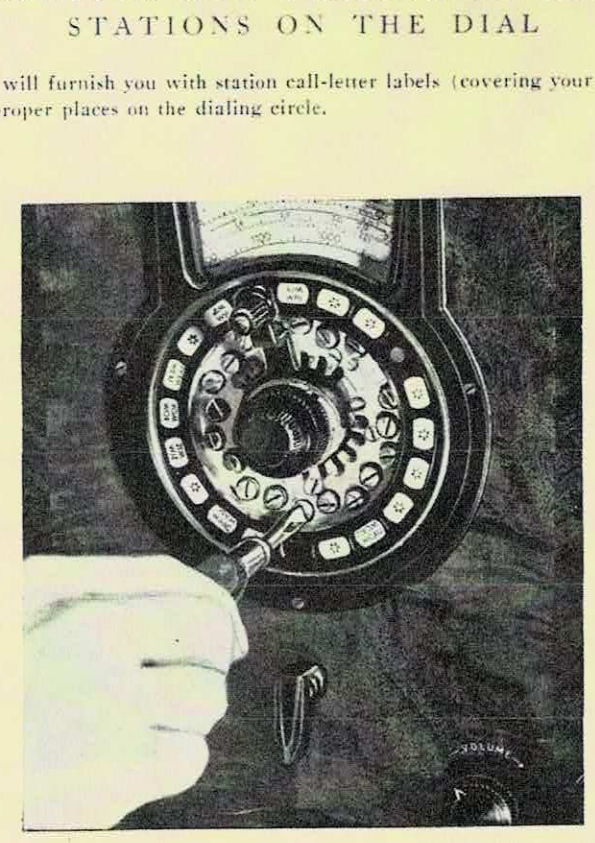

Fig. 2

To insert these station name tabs in the proper places, first turn the set "ON," tuning range selector in position 1, and Magnetic Tuning to "Out." It will then be necessary to remove the metal plate over the "finger" or handle used to dial the stations. This is done by removing the tuning knobs and three screws in this plate, and lifting off the plate over the handle. This will expose a circle of "control screws" which are used to locate your favorite stations. Remove the narrow copper band which extends around the circle to hold the station call labels in place. Replace the station selector knob, tune the dial to the station desired, then insert the blade of a screwdriver in the control screw nearest the bottom position of the circle, press it in, and twist it back and forth until a click is heard, indicating that the control screw has engaged the locking mechanism. Now turn the dial back and forth slightly by twisting the control screw back and forth until best reception is obtained. Release the pressure and continue twisting very slightly until the screw jumps out to its original position. Then insert the station name card in the slot below the screw. Repeat this procedure *until the several desired stations are located, then insert* blanks or "Starred" name cards in the remaining slots not used for stations. Finally replace the metal cover plate and copper band in their original positions, and also the tuning and control knobs.

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INSTRUCTIONS FOR PHILCO 38-690

We do not advise placing more than six to eight favorite stations on the dial, as experience has shown that more than this causes confusion and difficulty in selecting the desired one, thus defeating the purpose of the dial—quick correct selection of a desired station or program.

DIALING A STATION

To dial a station turn the dialing handle until it is over the window of the station wanted, press the knob in firmly, then (keeping it pressed in) turn the handle down to the bottom stop position, but **in such direction that the small red circle does not have to pass through the bottom position,** then release the knob and you have your station.

(Since the dial cannot be turned past the bottom position in either direction, the red circle is provided as a guide to which direction to turn the dial to get your station. A simple rule is: Note the position of the red circle before dialing and always turn the dial in such direction that the red circle will *not* pass the bottom position.)

After a little practice you can readily see which way to turn before starting to dial.

SERVICE

For the convenience of all radio owners, Philco has developed a plan for prompt, efficient radio service in every locality. This plan is known as "Radio Manufacturers Service." There is a member in your neighborhood—his shop or store can be identified by the emblem shown here. To make sure of guaranteed work, genuine Philco tubes and parts and standard prices—call a member of Radio Manufacturers Service.

Look for this Emblem in your Neighborhood

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WARRANTY

We warrant each new Philco Radio Receiver and Speaker to be free from defects in material and workmanship under normal use and service, our obligation under this warranty being limited to making good at our depot any part or parts thereof which shall, within ninety (90) days after delivery of such Receiver to the original retail purchaser, be returned to our depot with transportation charges prepaid, and which our examination shall disclose to our satisfaction to have been thus defective; this warranty being expressly in lieu of all other warranties expressed or implied, and of all other obligations or liabilities on our part, and we neither assume nor authorize any representative or other person to assume for us any other liability in connection with the sale of Receivers or Speakers.

This warranty shall not apply to any Receiver or Speaker which shall have been repaired or altered other than by us in any way so as, in our judgment, to affect its stability or reliability, nor which has been subject to misuse, negligence or accident, nor which has had the serial number altered, effaced or removed. Neither shall this warranty apply to any Receiver or Speaker which has been connected otherwise than in accordance with the instructions furnished by us.

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